**IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA**

IN RE GEISINGER SYSTEM
SERVICES AND EVANGELICAL
COMMUNITY HOSPITAL
HEALTHCARE WORKERS
ANTITRUST LITIGATION

No. 4:21-cv-196 (MWB)

Class Action

August 6, 2024

**DEFENDANTS' OPPOSITION TO PLAINTIFFS' MOTION
TO EXCLUDE AN OPINION AND RELATED ANALYSES OF
DR. LAURENCE BAKER**

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INTRODUCTION

Plaintiffs' Motion to Exclude is focused on one important opinion of Defendants' expert, Professor Laurence Baker.[1] Prof. Baker offers a time series analysis that compares wages for class members at Geisinger and Evangelical with wages for healthcare workers in Pennsylvania who worked outside of the alleged class geography. Zapala Decl., Ex. 9, Expert Report of Laurence Baker, Ph.D. ("Baker") ¶¶ 137-45, Exs. 12, 13. Using U.S. Bureau of Labor Statistics ("BLS") Occupational Employment and Wage Statistics ("OEWS") data to create a benchmark comparison group of healthcare workers who could not have been harmed by the alleged agreement, Prof. Baker's analysis shows that average wages and wage growth for Geisinger and Evangelical healthcare workers tracked or outpaced average wages and wage growth for healthcare workers in Pennsylvania outside of the class geography. *Id.*

This is exactly opposite of what the data should show to support Plaintiffs' allegations that healthcare wages were suppressed "below the levels that would have prevailed but for" an alleged no direct solicitation agreement between Defendants.

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[1] Plaintiffs' motion narrowly seeks exclusion of paragraphs of Prof. Baker's report. Plaintiffs' Memorandum of Law in Support of Motion to Exclude an Opinion and Related Analyses of Dr. Laurence Baker ("Baker Daubert"), ECF No. 180 at 1 ("Plaintiffs respectfully move this Court to exclude an opinion . . . set forth at paragraphs 137 to 145 of the Expert Report of Laurence Baker, Ph.D. (March 8, 2024) (Further Corrected) and Exhibits 12-13 thereto.").

Consolidated Class Amended Complaint ("CAC") ¶ 3, ECF No. 101. Thus, Prof.

Baker's time series analysis using OEWS data undermines Plaintiffs' antitrust

impact and damages theory, because it shows that class members did not suffer

comparatively worse wages or wage growth than non-class members. *Id.*

Plaintiffs move to exclude Prof. Baker's testimony with respect to his time

series analysis, arguing that time series analyses that rely on OEWS data are

"fundamentally flawed." Baker Daubert at 2. Yet, scholars publishing in peer

reviewed journals have used OEWS data for time series analyses in the same manner

Prof. Baker uses the data here, and Plaintiffs' own expert, Prof. Leamer, also used

OEWS data for a time series analysis in a case that Plaintiffs heavily cite. *See, e.g.*,

Ex. A, Reply Expert Report of Edward Leamer, *In Re High-Tech Employees*

Antitrust Litig. (Dec. 11, 2013) ("Leamer *High-Tech* Expert Report"), ¶¶ 121-29,

Fig. 20. A similar time series analysis also was admitted during trial in another

antitrust case alleging a conspiracy in a labor market. Ex. B, *United States v. DaVita*

Inc., No. 21-cr-00229, Trial Tr., Day 7, 1309:9-19, 1344:5-17, 1363:3-1370:20 (D.

Colo. June 16, 2022) ("*DaVita* Trial Tr.") (introducing expert testimony regarding

the use of OEWS compensation data as a benchmark). Neither Plaintiffs nor

Plaintiffs' expert show that Prof. Baker's analysis is otherwise lacking in relevance

or reliability. To the contrary, Prof. Baker's time series analysis meets the *Daubert*

standard for admissibility, and thus, Plaintiffs' motion should be denied.[2] *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993); FRE 702.

SUMMARY OF PROF. BAKER'S OPINIONS

Laurence Baker has been a Professor at Stanford University in economics and healthcare for over twenty-five years, and currently holds faculty appointments at the Stanford University School of Medicine and Stanford University Department of Economics. Baker ¶ 1. His extensive training and peer-reviewed research into healthcare markets, competition in healthcare, and compensation for healthcare providers qualify him to provide an opinion on the alleged harm to competition in the purported healthcare market in this matter. *Id.* ¶¶ 1-4.

Plaintiffs' narrow challenge focuses on Prof. Baker's time series analysis. Baker Daubert at 1 ("Plaintiffs respectfully move this Court to exclude an opinion . . . set forth at paragraphs 137 to 145 of the Expert Report of Laurence Baker, Ph.D. (March 8, 2024) (Further Corrected) and Exhibits 12-13 thereto."). In this section of his report, Prof. Baker tests Prof. Leamer's opinion that class member wages were

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[2] Plaintiffs' motion also contains criticisms of some of Prof. Baker's other opinions, but Plaintiffs do not seek to exclude Prof. Baker's testimony based on those opinions. *Biniek v. Marmaxx Operating Corp.*, No. CV 14-1154, 2015 WL 5781636, at *8 (M.D. Pa. Sept. 30, 2015) (reasoning that arguments not substantively addressed in a brief are "waived"). Nevertheless, Defendants address those criticisms in Section II of this Memorandum for completeness.

suppressed using OEWS data as a benchmark. Baker ¶¶ 137-45, Exs. 12, 13. As

Prof. Baker explains, OEWS data provides a useful comparison:

> As a preliminary test for wage suppression, I compare proposed class member wages to those of another relevant set of workers. I use for this comparison the group of non-class healthcare workers in Pennsylvania who were employed outside the class geography. Since it is reasonable to expect that these workers would have been subject to a generally similar set of economic, social, policy, and other forces as proposed class members, but according to Plaintiffs' theories would not have been affected by the alleged agreement, they can form a useful comparison group.

Id. at ¶ 140. Prof. Baker concludes that his analysis "show[s] that proposed class

members' wages exceeded and grew faster than wages for those in this comparison

group during the class period, casting serious doubt on Plaintiffs' claim that the

alleged agreement reduced compensation for proposed class members." *Id.*

In particular, Exhibit 12 from Prof. Baker's report, excerpted below, compares

average wages for healthcare workers in Pennsylvania (green), with average wages

at Evangelical (orange) and Geisinger (blue). *Id.* ¶ 141-42, Ex. 12. Exhibit 12 shows

that, during the class period, class member wages at Geisinger and Evangelical were

as high, or higher, than wages for non-class members in Pennsylvania. *Id.*
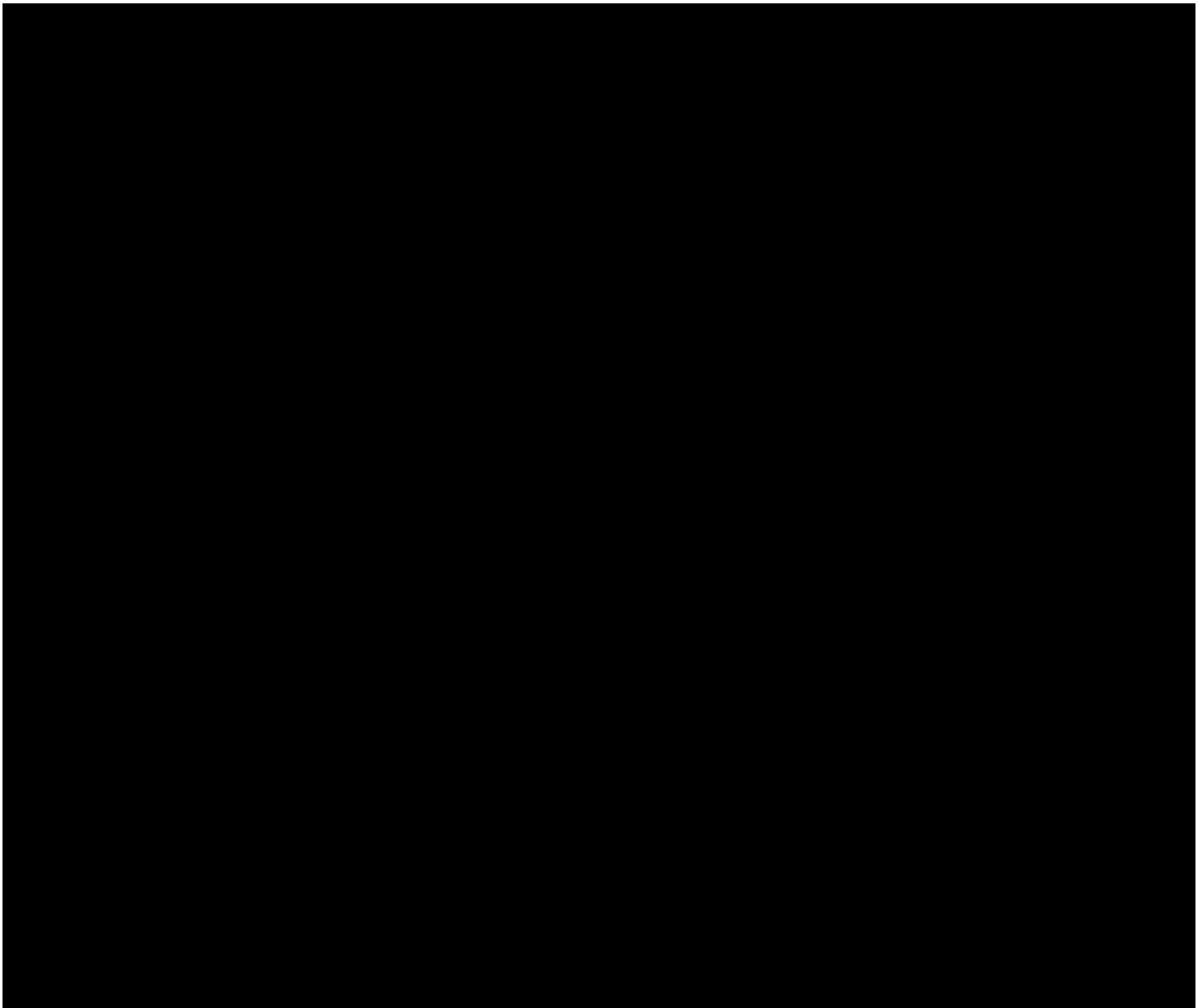
In addition, Exhibit 13 from Prof. Baker's report, excerpted below, compares average wage growth for healthcare workers in Pennsylvania (green), with wage growth at Evangelical (orange), and Geisinger (blue). *Id.* ¶ 143-44, Ex. 13. Exhibit 13 shows that, during the class period, class member wages at Geisinger and Evangelical grew as fast, or faster, than wages for non-class members in Pennsylvania. *Id.*

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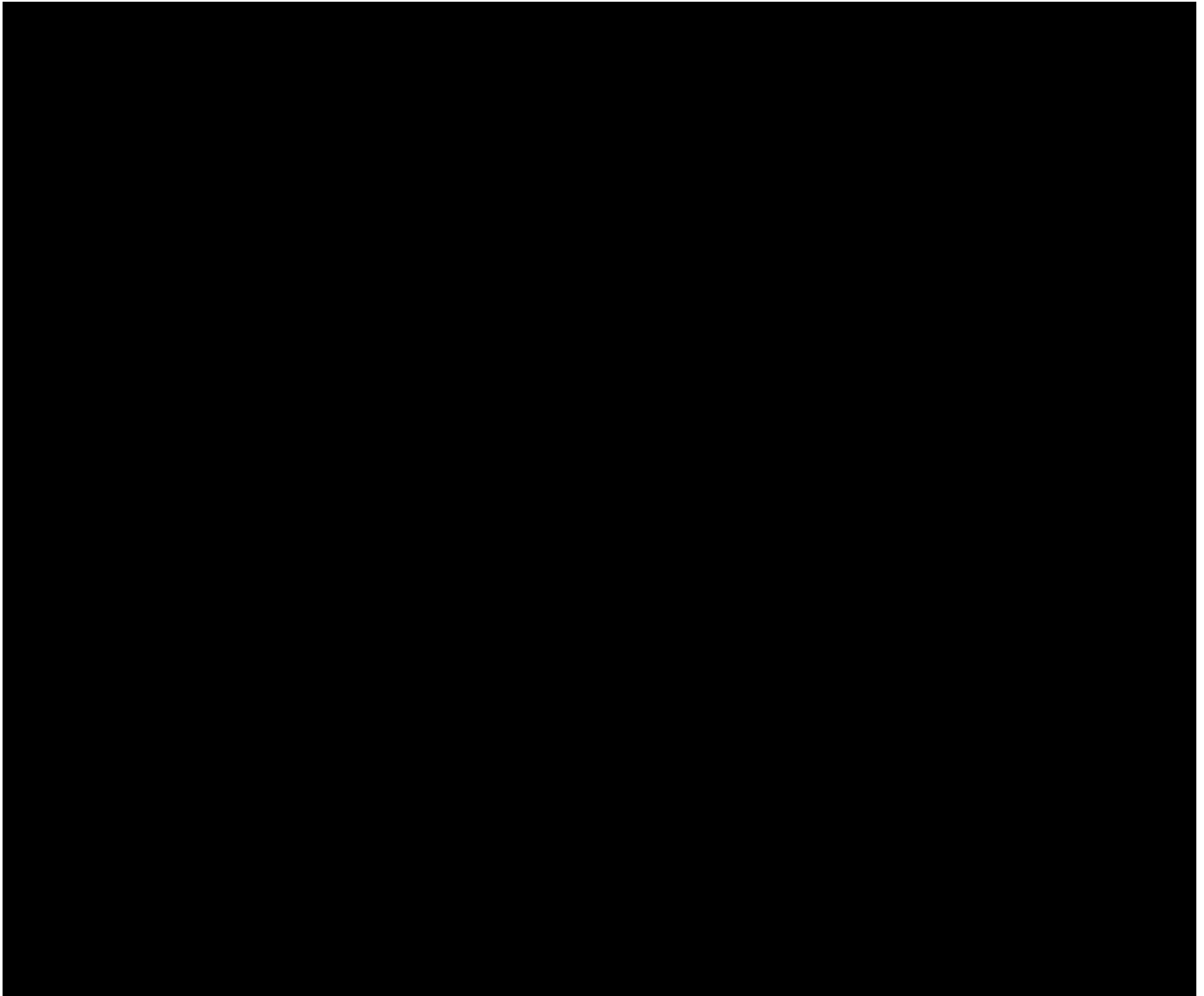
Plaintiffs argue that Prof. Baker's analysis is "fundamentally flawed" because it relies on OEWS data. Baker Daubert at 2. But as Prof. Baker explained in his deposition, Prof. Baker accounted for any concerns regarding the reliability of the OEWS data for purposes of his analysis:

> Q. Are you aware that the Bureau of Labor Statistics warns users not to use the OEWS data in a time series study?

A. I'm aware that they offer some cautions, and I've reviewed those cautions, and [] my analysis accounts for those things. I'm also aware that, for example, Dr. Leamer has used this data in time series analyses. I'm aware that people from the Bureau of Labor Statistics have used this data in time series. I'm aware that other economists have used these data in time series analyses. So, yes, I'm aware that they point out some cautions, we adapted to them, but we're not using them in a way that's inconsistent with other's uses of them.

Ex. C, Baker Dep. at 294:17-295:6. Prof. Baker's analysis is supported by peer-reviewed articles, and his approach carefully considered any reliability concerns. *Id.*; Baker ¶¶ 137-45, Exs. 12, 13. Prof. Leamer critique does not undermine the reliability of Prof. Baker's conclusions. Zapala Decl., Ex. 10, Rebuttal Report of Edward Leamer, Ph.D. ("Leamer Reb."), § V.A.

LEGAL STANDARD

Expert opinions must be relevant, reliable, and "based on" (i) "sufficient facts or data;" (ii) "reliable principles and methods;" and (iii) reliably apply "principles and methods to the facts of the case." FRE 702. Because "expert evidence can be both powerful and quite misleading," courts must act as gatekeeper to exclude expert opinions that fail to meet *Daubert* standards. *Allen v. Foxway Transp., Inc.*, No. 21-CV-00156, 2024 WL 388133, at *3 (M.D. Pa. Feb. 1, 2024) (expert testimony should "aid the jury in resolving a factual dispute"); *Daubert*, 509 U.S. at 591. A recent amendment to FRE 702 responds to "judges [who failed to] apply the preponderance standard of admissibility to Rule 702's requirements of sufficiency of basis and reliable application of principles and methods, instead holding" such issues were

"questions of weight and not admissibility" and thus "for the jury."[3] *Allen*, 2024

WL 388133, at *3. Defendants bear the burden of proving admissibility by a

preponderance of the evidence, and "critical questions of the sufficiency of an

expert's basis for his testimony" are a question of admissibility. *Id.*

Courts consider a multi-factor reliability test, including whether: (i) an expert

is "qualified"; (ii) "testimony is reliable and relates to matters requiring scientific,

technical, or specialized knowledge;" and (iii) testimony is "'sufficiently tied to the

facts of the case,' so that it 'fits' the dispute[.]" *UGI Sunbury LLC v. A Permanent*

Easement for 1.7575 Acres, 949 F.3d 825, 832 (3d Cir. 2020) (citing *Daubert*, 509

U.S. at 591). An expert's methodology must be rigorous, not "haphazard, intuitive

inquiry," and opinions must be "sufficiently tied" to the methodology. *Pa. State*

Univ. v. Vintage Brand, LLC, No. 21-CV-01091, 2024 WL 456139, at *7 (M.D. Pa.

Feb. 6, 2024) ("*Penn State*") (quotations and citation omitted); *see also Bruno v.*

Bozzuto's, Inc., 311 F.R.D. 124, 136 (M.D. Pa. 2015) (requiring sufficient nexus

"between [] scientific research or test result [] and [] disputed fact[s]") (citing *UGI*

Sunbury, 949 F.3d at 832)[4]; *Daubert*, 509 U.S. at 591-92 (requiring "valid scientific

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[3] Plaintiffs quote *In re Actiq Sales & Marketing Practices Litigation*, No. 07-cv-
4492, 2014 WL 3572932 (E.D. Pa. July 21, 2014) for the proposition that "rejection
of expert testimony is the exception and not the rule." *Id.* at *2 (denying motion to
exclude expert evidence); *see* Baker Daubert at 10. *Actiq* predates recent
amendments to Rule 702 noted in Advisory Notes and misstates the burden of proof.
[4] The Third Circuit also requires "good grounds" based on a non-exhaustive,

connection to the pertinent inquiry as a precondition to admissibility"). Evidence

lacking "sufficient factual basis" is inadmissible. *In re Chocolate Confectionary*

Antitrust Litig., No. 08-MDL-1935, 2013 WL 11305184, at *6 (M.D. Pa. May 10,

2013).

ARGUMENT

Professor Baker's robust time series analysis will help the trier of fact assess

Plaintiffs' alleged antitrust impact and damages. *Daubert*, 509 U.S. at 591; FRE 702.

As discussed in Section I, below, Prof. Baker's methodology using OEWS data to

conduct a time series analysis is similar to that adopted by Plaintiffs' expert, Prof.

Leamer, in another antitrust matter alleging a conspiracy to suppress wages. *See* Ex.

A, Leamer *High-Tech* Expert Report, ¶¶ 121-29, Fig. 20. As Prof. Leamer did in

High-Tech, in this case, Prof. Baker compares trends in wages for the proposed class

with trends in OEWS wages for a comparison group of workers. *Id.*

Other scholars and the BLS support Professor Baker's measured methodology

for using OEWS data as a benchmark in a time series analysis. *Penn State*, 2024

WL 456139, at *7-8 (reasoning that courts should consider whether a "method is

generally accepted" and the methodology "has been subject to peer review").

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multifactor test considering whether (i) the methodology is testable; (ii) the expert's
methodology has been peer-reviewed; (iii) the method is generally accepted; (iv) the
expert is qualified; and (v) the methodology has been applied to "non-judicial uses."
No individual factor is dispositive. *Penn State*, 2024 WL 456139, at *7-8 (quoting
UGI Sunbury, 949 F.3d at 833-34); *Bruno*, 311 F.R.D. at 136-37, 143-44.

Moreover, Prof. Baker does not just assume that OEWS data can serve as a reliable benchmark, rather, he tests whether the benchmark is reliable by applying a well-accepted economic method. Baker Exs. 12, 13; Ex. C, Baker Dep. at 290:16-291:1.

Finally, as discussed in Section II, below, Plaintiffs' arguments in their Statement of Facts related to Prof. Baker's other opinions are unsupported by the record and waived, as Plaintiffs do not seek to strike those opinions in their motion. *Biniek*, 2015 WL 5781636, at *8 (reasoning that arguments not substantively addressed in a brief are "waived"). In sum, Prof. Baker's opinions are relevant, reliable, and admissible. *Daubert*, 509 U.S. at 590-91; FRE 702.

I.   PROF. BAKER'S TIME SERIES ANALYSIS USING OEWS DATA AS A BENCHMARK IS RELIABLE AND RELEVANT.

Defendants have met their burden to prove by a preponderance of the evidence that Professor Baker's time series analysis is relevant and reliable. *Daubert*, 509 U.S. at 592 n.10; FRE 702. Prof. Baker utilizes OEWS data to render the relevant opinion that proposed class members' wages were as high or higher than wages for a benchmark group of healthcare workers Pennsylvania outside the class geography, and that wages for healthcare workers working at Defendants grew as fast, or faster, than wages for healthcare workers in the OEWS benchmark group. Baker ¶¶ 137-45, Exs. 12, 13. Prof. Baker tested the reliability of OEWS data as a comparison group using well-established economic methods. *Id.*; Ex. C, Baker Dep. at 290:16-291:1. Thus, Prof. Baker's time series analysis is a tested, reliable analysis and a

useful critique of Prof. Leamer's prediction of antitrust impact and harm. *Penn State*, 2024 WL 456139, at *7. Without Prof. Baker's opinions the jury will lose significant insight into the unreliability of the damages and impact allegedly measured by Prof. Leamer's before-and-after regression analysis. *Allen*, 2024 WL 388133, at *3 (expert testimony must fit "the facts of the case" to "aid the jury in resolving a factual dispute"). Plaintiffs' motion should be denied, and Prof. Baker's opinions should be admitted in their entirety. *Daubert*, 509 U.S. at 590-91; FRE 702.

A.   OEWS data can be used reliably for time series analyses.

Plaintiffs claim that the U.S. Bureau of Labor Statistics ("BLS") Frequently Asked Questions ("FAQ") warn against the use of OEWS data in time series analysis and therefore Prof. Baker's application of OEWS is categorically unreliable. Baker Daubert at 2. But Plaintiffs misconstrue BLS's disclaimer against relying on the OEWS data. The same source Plaintiffs cite, the BLS OEWS FAQ page, also contains language indicating that time series analyses can be conducted using the OEWS data if "methodological assumptions" hold. *See* U.S. Bureau of Labor Statistics, *OEWS Frequently Asked Questions* ("OEWS FAQs") (noting comparisons "may be possible if the methodological assumptions hold"), https://web.archive.org/web/20240416100715/https:/www.bls.gov/oes/oes_ques.ht

m[5] (last visited July 30, 2024). BLS's warning is not categorical; rather, it calls for

a measured approach, which is what Prof. Baker did here. *Id.*

Indeed, despite Prof. Leamer claiming that he is not able to use OEWS data

to "fully construct an apples-to-apples comparison," and concluding that he would

not "want to rely on that data when I have the Defendants' data that is more

appropriate for the tasks at hand," Prof. Leamer has used OEWS data in the past.

Leamer Reb. ¶ 113. Prof. Leamer used OEWS data in *High-Tech* for a time series

analysis similar to the one Prof. Baker conducts in this matter. Ex. A, Leamer *High-*

Tech Expert Report, ¶¶ 121-29, Fig. 20 (comparing OEWS data, in red, to the

opposing experts' suggested benchmark control variable for industry wages, in light

blue, and Defendants' data in dark blue).

In *High-Tech*, Professor Leamer disagreed with the opposing expert, Dr.

Stiroh, that the median wages in the industry should be included as a control variable

in Prof. Leamer's wage regression. More pointedly, Prof. Leamer opined that, even

if an additional control variable was necessary, the median wages in the industry

from the source Dr. Stiroh cited, the Current Population Survey ("CPS") were not

the appropriate benchmark control variable. *Id.* Prof. Leamer explained in that case

that "[i]f Dr. Stiroh thinks we need an additional industry variable [in the wage

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[5] This is an archived copy of this website, dated April 16, 2024. BLS indicates the FAQ page "Last Modified Date" is May 14, 2024. Prof. Baker filed his report on March 8, and Prof. Leamer filed his rebuttal report on April 19.

regression], which we do not," a better option would be the average wage for software occupations in the OEWS data. *Id.* ¶ 128. Prof. Leamer noted that "BLS occupation wage series" data, specifically OEWS data, has a "large sample size" that "does not include supplemental compensation" which makes it an "appropriate market compensation variable[]." *Id.* ¶¶ 128-29.

Prof. Leamer then showed that adding the OEWS wage series as a control variable in his wage regression "does not undermine [his] damages estimates." *Id.* ¶ 129. In Figure 20 from his report in *High-Tech*, Prof. Leamer compared time series data for: (i) Defendants' average base salary (calculated using produced data from Defendants); (ii) median wages in the tech sector from the CPS data (the control variable that Dr. Stiroh claimed Prof. Leamer should have included in his regression model); and, (iii) average wages for software occupations in the OEWS data (the control variable that Prof. Leamer claimed was more appropriate than median wages in the tech sector from the CPS data). *Id.* Figure 20 from Prof. Leamer's *High-Tech* report contrasts Dr. Stiroh's CPS data series and the OEWS data series, and purports to show that the OEWS data series tracks Defendants' average base salary more closely than the CPS data series does—a result that Prof. Leamer appears to offer as evidence that the OEWS data series does a better job of controlling for Defendants' overall demand for employees than the CPS data series. *Id.*

Figure 20: Dr. Stiroh's Median Wage Does Not Track Defendant Compensation Closely
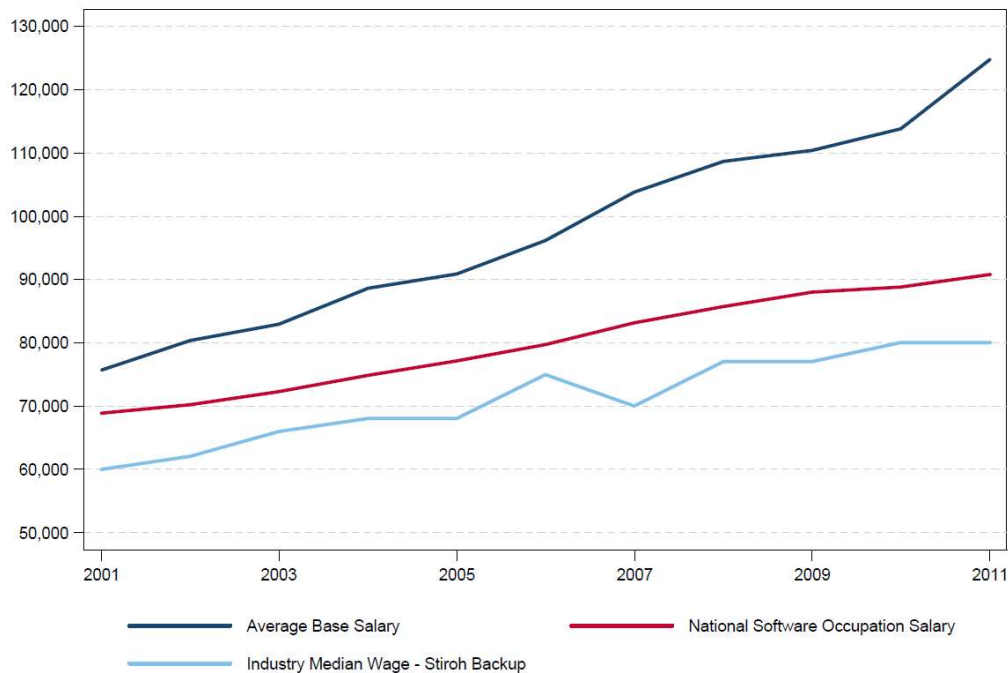
Source: Defendant Employee Data, Stiroh Backup, BLS

Just as Prof. Leamer compares OEWS data on average wages for software occupations to Defendant data on average wages for Defendants' software workers in *High Tech*, Prof. Baker similarly compares OEWS data on average wages for healthcare jobs to Defendant data on average wages for healthcare workers in the class. Baker ¶¶ 137-45, Exs. 12, 13. In doing so, Prof. Baker uses OEWS data as a benchmark for how wages for healthcare workers in the class should have grown but for the alleged agreement. *See, e.g.*, Exhibit 13 (excerpted below).

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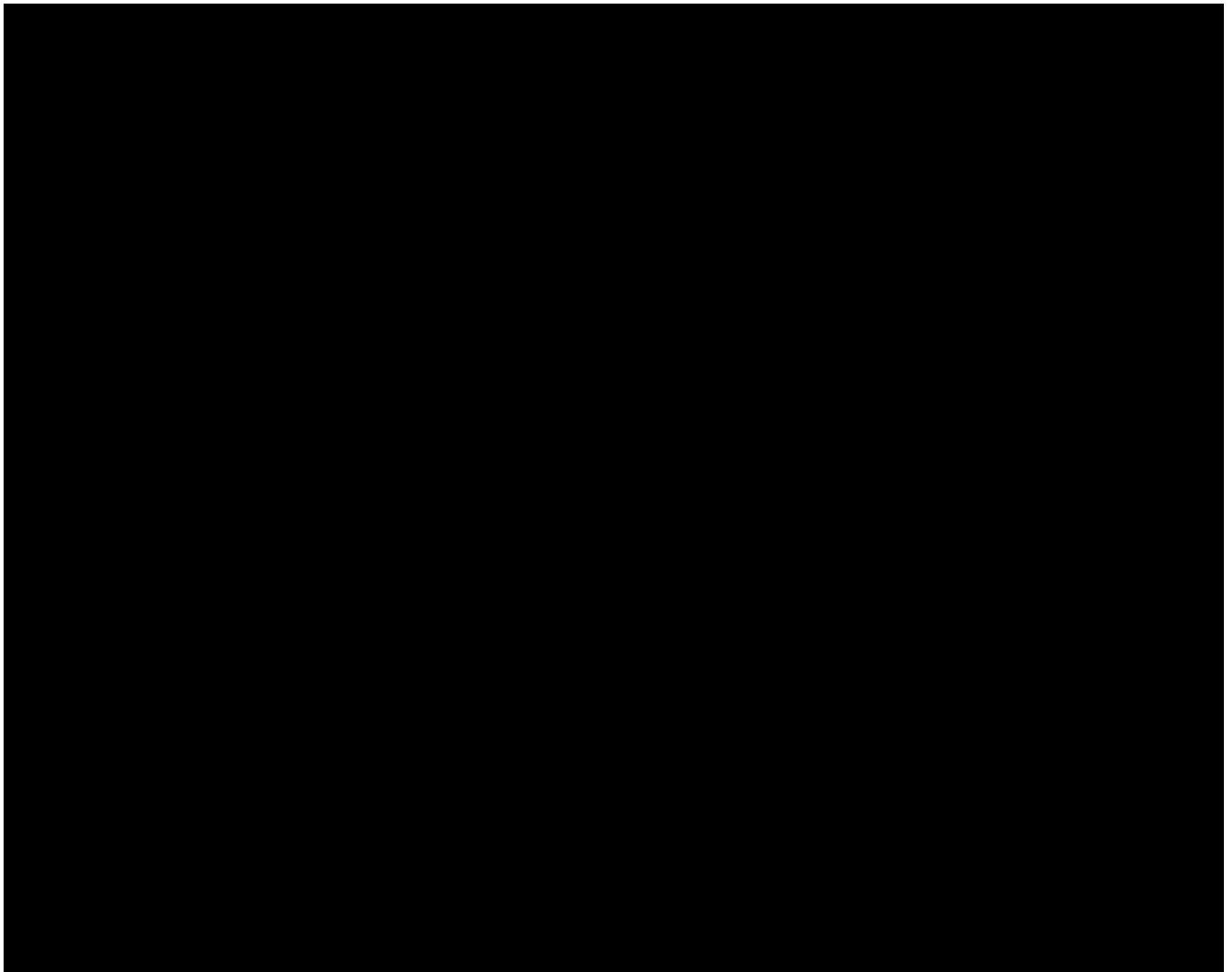
Professors Leamer and Baker are not the only academics who have used

OEWS data in time series analysis. In addition to *High-Tech*, OEWS data was also

used by Defendants' expert in another case to perform a time series analysis similar

to the one that Prof. Baker performs in his report in this matter. Ex. B, *DaVita* Trial

Tr., 1309:9-19 (describing bar graph that contrasted "bars" with wage data for

DaVita, "and next to them . . . the other bars were what I call the benchmark . . .

based on government data . . . on [] compensation that is published by the

government by the Bureau of Labor Statistics"). As in this case, Defendants' expert

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in *DaVita* shows that compensation for Defendants grows as fast, or faster, as the benchmark group. *Id.* at 1344:5-17 ("So what we see is that the movement in the rest of the economy is basically the same as it is at DaVita . . . the benchmark went up by 11.5 percent; the increase at DaVita was 13.5 percent; so it's roughly the same number, a little higher at DaVita. . . . There is no decrease in compensation at DaVita between the two periods and, therefore, no telltale sign of a cessation of competition, which would result in a decrease in competition."). Defendants' expert, Prof. Pierre Cremieux, explains that the OEWS benchmark helps account for potential variables in the economy that might have been overlooked in his analysis, to be sure that his analysis showing that wages at Defendants increased was reliable and not suffering from omitted variable bias.

> I[] us[e] the benchmark to confirm that what I see with my naked eyes—which is that the compensation went up, not down—is not in fact an artifice which results from something weird that would have been happening in the economy during that time and which would make an increase really be a decrease relative to my benchmark. [I]t's just a check to make sure that what I see—which is an increase in the compensation—is not somehow nullified by something that is happening in the economy that I didn't take into account. And just confirmed that, no, there was no such concerns.

Id. at 1363:3-1370:20.

Affiliates of the BLS also rely on the OEWS data for time series analyses in articles that the BLS publishes on their website.[6] Papers that use the OEWS data for

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[6] *See, e.g.*, U.S. Bureau of Labor Statistics, *As manufacturing sector changes,*

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time series analyses have been published in peer-reviewed economic journals.[7]

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production occupations disappear: an analysis of employment from 2007-20 (Nov. 2023) ("[T]he calculations in this analysis were carefully performed and consider the limitations of the OEWS program."), https://www.bls.gov/opub/btn/volume-12/as-manufacturing-sector-changes-production-occupations-disappear-1.htm; U.S. Bureau of Labor Statistics, *Employment trends by typical entry-level education requirement* (Sept. 2017) ("[B]ecause the data analyzed in this article are separated by at least 3 years, are presented at an aggregated level, and show strong trends, general conclusions can be drawn from them."), https://www.bls.gov/opub/mlr/2017/article/employment-trends-by-typical-entry-level-education-requirement.htm; John I. Jones, *What do OES data have to say about increasing wage inequality?*, Monthly Labor Review, at 39 (June 2009) ("The virtue of using OES data for this type of analysis is that each period examined includes wage and detailed occupational data on more than 80 million workers."), https://www.bls.gov/opub/mlr/2009/06/art3full.pdf; U.S. Bureau of Labor Statistics, *Occupational Employment and Wages, 2010*, at 41, Fig. 31 (Oct. 2011) (demonstrating percentage change in construction employment and wages from May 2006 to May 2010), https://www.bls.gov/oes/chartbook_2010.pdf.

[7] *See, e.g.*, Ex. D, Leemore Dafny *et al.*, *Paying a Premium on Your Premium? Consolidation in the US Health Insurance Industry*, Am. Econ. R., 102(2): 1161-1185, at 1180-1181, Appendix 6, Table D (Apr. 2012) (this paper performs time series analyses with the OEWS data by using the data series of wages over time as an outcome variable in a regression analysis, and presenting the data series of wages over time in a table); Ex. E, Wang, Frank, and Glied, *Lasting scars: The impact of depression in early adulthood on subsequent labor market outcomes*, Health Economics, 32(12): 2694-2708, at 2697 (July 2023) (this paper performs time series analyses with the OEWS data by using the data series of wages over time as an outcome variable in a regression analysis); Ex. F, Aaronson & Phelan, *The Evolution of Technological Substitution in Low-Wage Labor Markets*, R. of Econ. & Stat., at 7-9, Tables 2-4, Fig. 1 (Mar. 2022) (this paper performs time series analyses with the OEWS data by pooling wage data across the years 2010-2018 to define a set of "wage bins," and using the data series of employment over time as an outcome variable in a regression analysis, and plotting the data series of employment over time); Ex. G, Hershbein & Kahn, *Do Recessions Accelerate Routine-Biased Technological Change? Evidence from Vacancy Postings*, Am. Econ. R., 108(7): 1737-1772, at 1765 (2018) (this paper performs time series analyses with the OEWS data by using the data series of wages and employment over time as outcome variables in a regression analysis).

In sum, Prof. Baker's use of OEWS data alone does not render his analysis "fundamentally flawed," as Plaintiffs argue. Baker Daubert at 2. Scholars regular use of OEWS data for time series analysis, including Prof. Leamer's similar use of the OEWS data in his December 11, 2013 report for *High-Tech*, supports Prof. Baker's methodology. *Penn State*, 2024 WL 456139, at *7-8 (reasoning courts should consider whether a "method is generally accepted" and the expert's methodology "has been subject to peer review"). This is certainly not a case where the "data underlying the expert's opinion are so unreliable that no reasonable expert could base an opinion on them[.]" *In re TMI Litig.*, 193 F.3d 613, 669-70 (3d Cir. 1999) (reasoning expert's "plume movie" which was "a series of sketches he drew to illustrate his hypothesized plume movements" was "based on pure speculation") (quotations omitted); *Montgomery Cnty. v. Microvote Corp.*, 320 F.3d 440, 448-49 (3d Cir. 2003) (quoting *TMI*, 193 F.3d at 697 (affirming a jury verdict, reasoning there was no abuse of discretion in excluding of expert's "'guestimate' about the amount of time that the [voting] machines were down" where the expert "did not measure actual election use data to determine how long the machines were down"); *State Farm Fire & Cas. Co. v. Electrolux Home Prods., Inc.*, 980 F. Supp. 2d 1031, 1049 (N.D. Ind. 2013) (reasoning expert analysis was unreliable because it compared two different types of data—national data collected from fire departments across the country, and self-reported data collected by Defendant). Prof. Baker's analysis is

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relevant and reliable and should be admitted. *Daubert*, 509 U.S. at 590-1; FRE 702.

> **B.**   **Prof. Baker tested the reliability of his time series analysis using a standard test for reliability known as a "pre-trend test."**

Plaintiffs incorrectly claim that Professor Baker performed "*zero* analysis" to

corroborate the fact that wages for the benchmark group and class members would

have been subject to similar forces. Baker Daubert at 4. To the contrary, Prof. Baker

checked whether his time series analysis is reliable using the pre-trend test. *See* Ex.

C, Baker Dep. at 290:16-291:1 ("[T]he most relevant thing to look at is the change

in the distance, the vertical distance from the preclass period to the class period and

so the fact that those are pretty parallel in the pre period suggests that the comparison

between Geisinger and Evangelical and the health care workers in Pennsylvania is a

useful thing to do[.]"); Ex. H, Gertler *et al.*, *Impact Evaluation in Practice*, World

Bank Group, at 137 (2 ed. 2016) ("If the outcomes [for the comparison group and

the enrolled group] moved in tandem before the program started, we gain confidence

that outcomes would have continued to move in tandem after [.]"). This standard

test is used by economists to assess whether a benchmark group and a comparison

group "would be subject to different conditions affecting pay." Baker Daubert at 4.

Prof. Baker showed in Exhibits 12 and 13, above, that prior to the class period,

wages changed similarly over time between the benchmark group and class

members, suggesting that the benchmark data appropriately controls for time

varying factors that could influence wages. *See* Ex. I, Bailey & Goodman-Bacon,

The War on Poverty's Experiment in Public Medicine: Community Health Centers and the Mortality of Older Americans, Am. Econ. R., 105(3): 1067-1104, at 1082 (Mar. 2015) (explaining that "results … provide no evidence of a differential trend" in the before period which implies that the model properly captures the effects of the programs it seeks to measure); Ex. J, Kuziemko *et al.*, *Does Managed Care Widen Infant Health Disparities? Evidence from Texas Medicaid*, Am. Econ. J., 10(3): 255-283, at 269 (2018) ("[W]e do not observe any pre-trends for either group [] giving us some reassurance that they serve as useful counterfactuals for each other."); Ex. K, Hoynes *et al.*, *Long-Run Impacts of Childhood Access to the Safety Net*, Am. Econ. R., 106(4): 903-934, at 928 (2016) (explaining that coefficients were flat for age groups with less exposure to the program being studied, as one would expect if there was no pre-trend). These results give further assurance that Prof. Baker's approach meets admissibility standards under FRE 702 and *Daubert*. *Daubert*, 509 U.S. at 591; FRE 702.

> **C.   Prof. Baker took the steps necessary to use the OEWS data reliably in a time series analysis.**

Professor Baker did not just conduct a pre-trend test, he also considered changes over time in the OEWS data that may lead to unreliability, and selected the parameters of his analysis to account for any perceived weaknesses that could be expected as a result of changes in OEWS data over time. *Daubert*, 509 U.S. at 594 (reasoning that courts "ordinarily should consider . . . the existence and maintenance

of standards controlling the technique's operation"); *In re TMI Litig.*, 193 F.3d at

664 (same).   The BLS discusses the following "comparability issues and data

limitations"[8] that any time series analysis of the OEWS data must account for—

Prof. Baker considered each, but concluded they did not have a meaningful effect on

his analysis or opinions:

- **Occupational Classification:** Prof. Baker analyzes broad healthcare categories, thus, narrower changes in occupational classification over time have no meaningful effect on his analysis. Ex. C, Baker Dep. at 293:11-294:16; Baker ¶ 141, n.273, n.275.

- **Industry Classification:** Prof. Baker pools data across all industries, thus changes in industry classification over time have no effect on his results. Baker ¶ 141, n.273.

- **Geographical Classification:** Prof. Baker analyzes a broad geography (all areas in Pennsylvania that do not overlap with the class geography) in his analysis, and his results are not sensitive to small changes in geographical classification over time. *Id.*; Ex. C, Baker Dep. at 303:11-17.

- **Scope:** BLS documentation notes two changes in scope. The first of these changes in scope did not involve employment of healthcare workers in Pennsylvania, and thus had no effect on Prof. Baker's results. The second of these changes in scope took place in May 2017. Prof. Baker's results hold even if he were to remove the data after this date altogether. Baker ¶ 141, n.273, Exs. 12-13; OEWS FAQs.

- **Data Collection:** In November 2017, OEWS made several changes in data collection. Prof. Baker's results hold even if he were to remove the data after this date altogether. Baker, Exs. 12-13; OEWS FAQs.

- **Survey Reference Period and Mean Wage Estimation Methodology:** These changes took effect in 2002, which is before the time period that Prof.
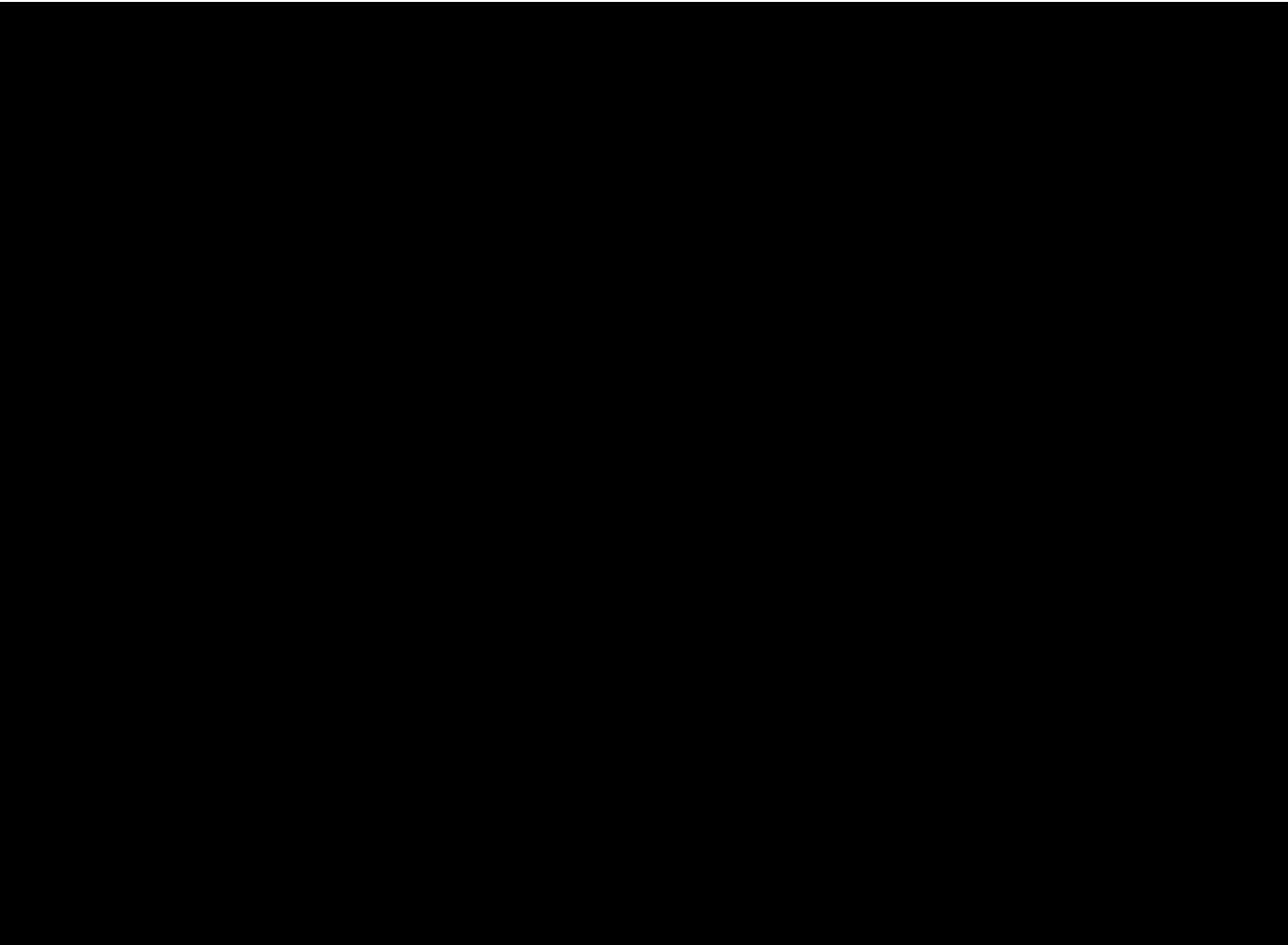
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[8] *See* BLS OEWS FAQ.

Baker analyzes. Thus, changes in the mean wage estimation methodology have no effect on his results. Baker, Exs. 12-13; OEWS FAQs.
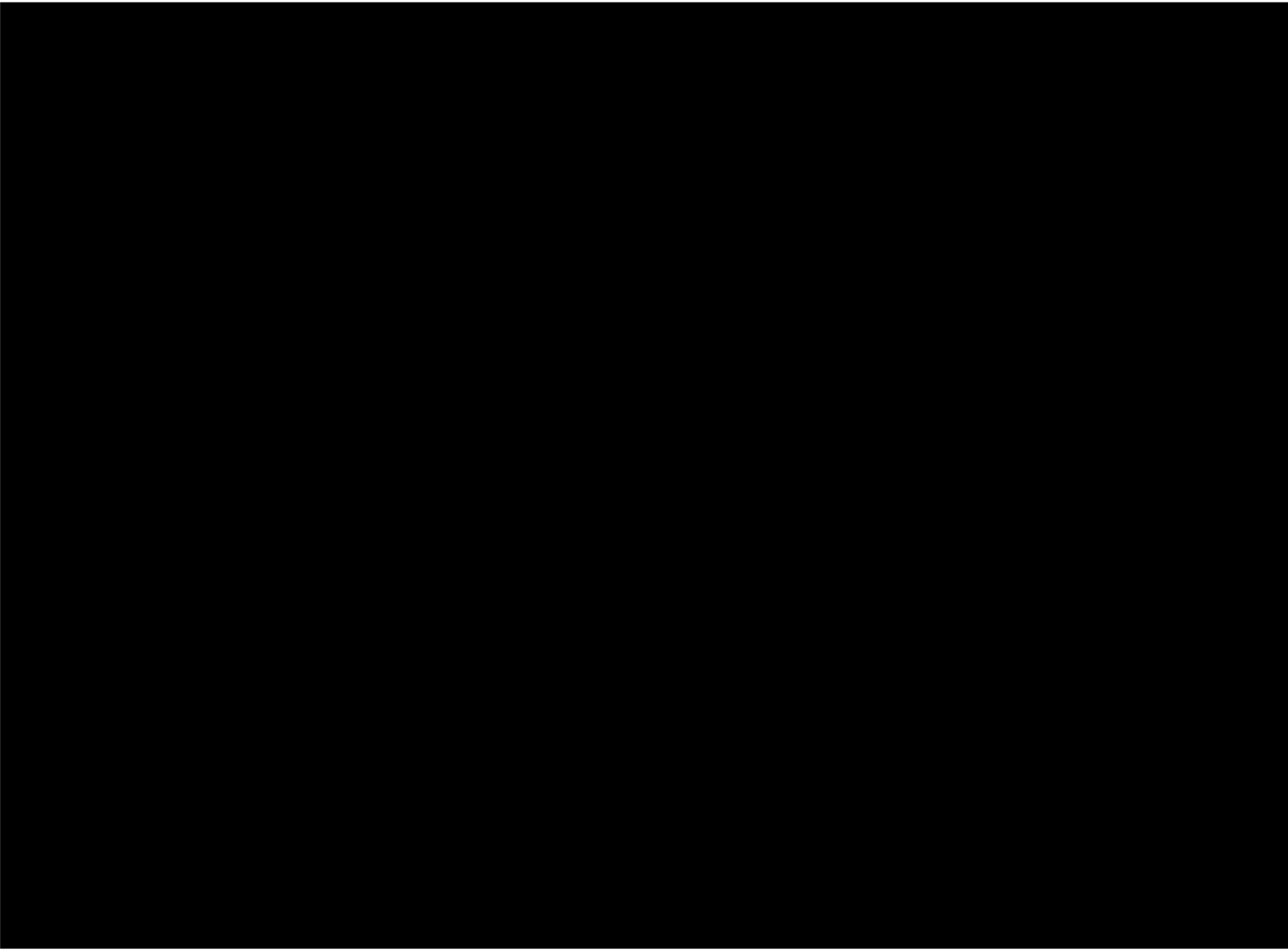
- **COVID-19:** Response rates may have been lower beginning in 2020 due to COVID-19. Prof. Baker's results hold even if he were to remove the data for 2020+ from his analysis altogether. Baker, Exs. 12-13; OEWS FAQs.

- **OEWS Methodology:** The OEWS survey data is collected over three years. Prof. Baker's results hold even if he focuses only on non-overlapping data points (*i.e.*, data points collected at least 3 years apart from one another). Baker, Exs. 12-13; OEWS FAQs.

Prof. Baker thus demonstrates that the "methodological assumptions" required to conduct time series analyses using such data hold in this setting. *See* BLS OEWS FAQ (noting comparisons "may be possible if the methodological assumptions hold").

Prof. Leamer refers to some of these changes in OEWS data collection over time in his rebuttal report, opining that Prof. Baker's comparison of Defendant wage data with OEWS wage data is not "apples-to-apples" because he could not "select hospital employees for a geographic area with a similar population density and degree of competition as Class Counties." Leamer Reb. ¶¶ 112-13; *see also State Farm*, 980 F. Supp. 2d at 1049-50 (reasoning that comparison of "reports by fire departments" and "data on Electrolux fires derived from only those fires reported to Electrolux" for "statistical risk analysis" was not reliable, because "using these two different types of data amounts to a comparison between 'apples and oranges,' which fails to meet Daubert's reliability standard").

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Prof. Leamer claims to have introduced a "simple correction" (replacing Pennsylvania data for all healthcare workers with national data for registered nurses), "to enable a more statistically-sound apples-to-apples comparison than the one on which Prof. Baker relies [that] produces an entirely different finding that contradicts Prof. Baker's findings and supports [Prof. Leamer's]." Leamer Reb. ¶¶ 111-12, Figs. 3, 4 (excerpted below). But as Figures 3 and 4 from Prof. Leamer's rebuttal report show, below, Prof. Leamer's results still show that Defendants' combined wages grew similarly to the benchmark OEWS group wages. *Id.*

Prof. Leamer's use of national OEWS data is not inherently more reliable than

Prof. Baker's use of Pennsylvania data, and neither is Prof. Leamer's selection of a

narrow category of healthcare worker—registered nurses.[9] *Id.* ¶ 113. Prof. Leamer

has not demonstrated that differences in population have any meaningful impact on

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[9] Prof. Leamer's choice to limit this analysis to registered nurses is also inconsistent with Plaintiffs' broad proposed class composed of all healthcare workers, not just nurses. CAC ¶ 1. Prof. Baker's use of Pennsylvania healthcare workers fits the case, and distinguishes Prof. Baker's analysis from the case law that Plaintiffs' cite in support of their Daubert motion. *See, e.g.*, *State Farm*, 980 F. Supp. 2d at 1051 (reasoning "statistical opinions d[id] not fit the facts of the case [because the expert's] comparison [was] not limited to dryer fires caused by lint accumulation . . . the liability theory in th[e] case").

Prof. Baker's results. Leamer Reb. § V.A.1-V.A.3. Nor is there any case law suggesting that Prof. Baker's reliance on OEWS data for healthcare workers in Pennsylvania is "fundamentally flawed." Baker Daubert at 2, 11-13. Plaintiffs certainly cannot argue that Prof. Baker is using data from one Defendant, to extrapolate profits for another. *In re Chocolate Confectionary Antitrust Litig.*, 2013 WL 11305184, at *5-6 ("Dr. Vellturo's extension of the Mars margin data to Nestlé USA lacks a sufficient factual basis, and must therefore be excluded.").

Ultimately, Prof. Leamer's use of national registered nurse OEWS data instead of Pennsylvania healthcare worker data does not change the conclusion: Prof. Leamer's rebuttal graph still shows that Defendants' combined wages tracked national trends, increasing at a similar rate before, during, and after the alleged conspiracy. *See* Leamer Reb. Figs. 3, 4. These results are inconsistent with the existence of a conspiracy that depressed wage growth at Defendants such that Defendants' wages did not grow in tandem with wages at other healthcare employers. *See also supra* I.B (discussing pre-trend analysis).

Prof. Leamer's analysis in rebuttal, supports, rather than undermines, the relevance and reliability of Prof. Baker's comparison of Defendants' wage data and OEWS wage data for healthcare workers. Thus, Prof. Baker's opinions should be admitted. *Daubert*, 509 U.S. at 590-91, FRE 702.

II.   PLAINTIFFS' STATEMENT OF FACTS MISSTATES PROF. BAKER'S PROCESS AND OPINIONS, AND THE RECORD REGARDING THE EXISTENCE OF A CONSPIRACY.

Despite narrowly seeking to exclude opinions related to Prof. Baker's time series wage analysis, Plaintiffs make several unsubstantiated conclusory assertions regarding the scope of Prof. Baker's review of the evidence, and the content of several documents in the record. Baker Daubert at 7-9. Defendants respond to these unsubstantiated and argumentative conclusions of "fact," notwithstanding that they relate to opinions that Plaintiffs do not move to strike and therefore are waived. *Biniek*, 2015 WL 5781636, at *8 (reasoning that arguments not substantively addressed in a brief are "waived").[10]

A.   Plaintiffs misstate Prof. Baker's analysis and opinions regarding purported evidence of the alleged agreement.

Plaintiffs mischaracterize Prof. Baker's opinions regarding the evidence Plaintiffs and Prof. Leamer cite in support of the alleged conspiracy. Baker Daubert at 8-9. Prof. Baker states clearly in his report that he "take[s] as true that an alleged

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[10] Plaintiffs attempt to undermine Prof. Baker's results by pointing to errata submitted to correct a mathematical error by Prof. Baker related to another opinion that Plaintiffs did not move to exclude. *Biniek*, 2015 WL 5781636, at *8. The correction of a mathematical error under accepted procedures alone is not a bar to admission of the corrected report. *See Aetna Inc. v. Express Scripts, Inc.*, 261 F.R.D. 72, 75 (E.D. Pa. 2009) (rejecting argument that expert's errata sheet was inadmissible because it made substantive changes to expert testimony, and reasoning that the opinions were reliable). It is undisputed that Prof. Baker's corrected results still show economically significant prediction error in Leamer's analysis, even after the correction. Baker ¶¶ 204-06, Exs. 25-27; Leamer Reb. ¶ 226.

agreement existed," and conducts a review of the documentary evidence focusing on "documentary evidence that [Prof. Leamer] claims provides direct evidence of the alleged agreement." Baker ¶ 18. As a result of this review of Prof. Leamer's evidence, Prof. Baker opines that Plaintiffs' evidence of the alleged agreement is limited and does not support Prof. Leamer's conclusions. *Id.*, Section III. For example, Prof. Baker notes that Prof. Leamer did not cite evidence of the alleged agreement for every year Plaintiffs allege. *Id.* ¶ 18. Because Prof. Leamer does not cite any deposition testimony from Kendra Aucker or Lynn Miller as "direct evidence" of the alleged agreement, Prof. Baker does not rely on their testimony as part of this analysis. *See generally* Zapala Decl., Ex. 3, Leamer Report, Section V.B.2 (titled "█████████████████████████████████"). Regardless of the merits, these arguments are not properly before the Court under this motion, since Plaintiffs did not move to strike any of Prof. Baker's opinions related to his review of Prof. Leamer's evidence of the existence of the alleged agreement. Baker Daubert at 2; *Biniek*, 2015 WL 5781636, at *8.

In addition, Plaintiffs and Prof. Leamer argue that Prof. Baker should have taken detailed notes of his witness interviews for Prof. Leamer to vet. Baker Daubert at 9; Leamer Reb. ¶ 27 (complaining that Prof. Baker did not take interview notes for Prof. Leamer to review); ¶ 197 (same). But nothing in the Federal Rules of Evidence requires an expert to make notes of any kind. *See also* FRE 703 ("An

expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed. If experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject, they need not be admissible for the opinion to be admitted."). Prof. Baker incorporated his findings directly into his report. Ex. C, Baker Dep. at 170:14-171:1. Moreover, Prof. Baker's purported failure to ask questions during these interviews that Plaintiffs would have liked is irrelevant, and ignores that Plaintiffs actually deposed the four individuals who Prof. Baker interviewed, and could have asked the same questions if they wanted to support their case and Prof. Leamer's expert opinions.

Prof. Baker's opinions regarding Prof. Leamer's direct evidence of the alleged conspiracy are not at issue in Plaintiffs' narrow motion to exclude. *Biniek*, 2015 WL 5781636, at *8. But if they were, they clearly meet the necessary threshold for admission under *Daubert* and FRE 702, and will be useful to the jury in assessing the strength of Prof. Leamer's analysis. *ZF Meritor, LLC v. Eaton Corp.*, 696 F.3d 254, 290 (3d Cir. 2012) (reasoning that where "opinion [i]s contradicted by the facts . . . an expert opinion is not supported by sufficient facts to validate it in the eyes of the law, or when indisputable record facts contradict or otherwise render the opinion unreasonable, it cannot support a jury's verdict") (quotations and citation omitted).

B. **Plaintiffs mischaracterize documents they cite to purportedly undermine Prof. Baker's quantitative analysis, but fail to do so.**

Plaintiffs cite several documents that not only confuse relevant issues, but

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entirely undermine their theory of the case. Baker Daubert at 7-8. In their Statement of Facts, Plaintiffs present an argumentative review of the record that conflates employee complaints about their low wages with evidence that such wages were suppressed because of the alleged agreement. *Id.* To the contrary, the record supports the analysis in Exhibits 12 and 13 of Prof. Baker's report: Defendants tried to match or beat the market average in order to retain and recruit healthcare workers in high demand, which is consistent with Prof. Baker's time series analysis showing that, at times, Defendants' wages exceeded average wages. Baker Exs. 12-3; *see also, e.g.*, Zapala Decl., Ex. 48 (GHS-LIT-00473901) at *902; Zapala Decl., Ex. 43 (EVAN0193633) at *650.

In fact, documents Plaintiffs cite in support of their *Daubert* motion show how Prof. Leamer ignored substantial documentary and testimonial evidence that contradicts his market power analysis. For example, Plaintiffs cite an email, which Plaintiffs claim, in a parenthetical, is a document "reporting employees as 'woefully underpaid,'" but that email in fact concerns a single employee, █████████, not all employees. Baker Daubert at 7; Zapala Decl., Ex. 45 (GHS-LIT-00391107); *see id.* at *109 ("███

██).

When Geisinger's HR reviewed ████████████████████████████████

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███████" *See id.* at *108. ████████████████████████████

████████████████████████████████. *See id.* at *107. Indeed, these

negotiations ████████████████████████ call into question many parts

of Plaintiffs' theory, including the purported effect of "internal equity" on all

healthcare worker wages, and Prof. Leamer's approach, which for most class

members ignores bonuses and other forms of compensation in calculating the alleged

undercompensation used to estimate class damages.

Moreover, the documents Plaintiffs cite show that direct solicitation, as Prof.

Leamer describes (*i.e.*, "cold calling"), was not a significant strategy for recruitment,

and that mobility, movement, and wages were not suppressed because of

Defendants' aim to pay competitive wages. *See, e.g.*, Zapala Decl., Ex. 43

(EVAN0193633) at *645 ("████████████████████████████

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██ .").

Notably, these documents also evidence a much larger market than Plaintiffs acknowledge. These documents demonstrate that Geisinger and Evangelical faced competitive pressure from many hospital and non-hospital firms in a wide geographic area, and considered market intelligence from a wide-geography in setting compensation. *See, e.g.*, Zapala Decl., Ex. 43, (EVAN0193633) at *646

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████████ ."); *677 ("██████████████████████████████

████████████████████████ ."); *id.*, Ex. 44 (GHS-LIT-01738214) at *257

("██

██████████████████████████); *id.*, Ex. 45 (GHS-LIT-00391107) at *108

(██);

id., Ex. 48 (GHS-LIT-00473901) at *902 (██████████████████████

██████████████████████ "). Plaintiffs and Prof. Leamer simply disregard these facts in their analysis.

Rather than show that Prof. Baker's analysis is flawed, the documents Plaintiffs cite in their motion in fact undermine Plaintiffs' allegations and cast further doubt on the opinions of Plaintiffs' expert, Prof. Leamer. Plaintiffs' documentary review should not distract from the question before this Court: whether Prof. Baker's

use of OEWS data renders his time series analysis admissible. Nothing in these

documents undermines the reliability of Prof. Baker's time series analysis relying

on OEWS data, which is relevant and reliable and thus should be admitted. *Daubert*

509 U.S. at 590-91; FRE 702.

CONCLUSION

Because Prof. Baker's opinions satisfy admissibility standards under *Daubert*

and Rule 702, Plaintiffs' motion to exclude should be denied.

Dated: August 6, 2024   Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that, on this 6th day of August, 2024, a true and correct copy of DEFENDANTS' OPPOSITION TO PLAINTIFFS' MOTION TO EXCLUDE AN OPINION AND RELATED ANALYSES OF DR. LAURENCE BAKER, was filed with the Court's Case Management/Electronic Filing System and Server upon all counsel known to be representing the Plaintiffs, including:

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